REMARKS

Claims 1-10 and 14-20 were pending in the application. Claims 1-5 were rejected and Claims 6-10 and 14-20 were withdrawn by the Examiner. Applicants amend Claim 1 herein with support at least on page 3, lines 8-12 and page 5, lines 7-8 of the Specification as filed. Claim 2 is canceled. Applicants assert no new matter is entered herein.

I. Objection to the Specification

The Specification is objected to for informalities. Specifically, the Examiner objects to the legends of Figure 1 and Figure 2 as being unclear.

The legend of Figure 1 is amended herein to clarify the figures. Support for the amendment is found in paragraph **[0053]**, and **[0054]** of the Specification.

Applicants respectfully request withdrawal of the objection.

II. Claim rejection under 35 U.S.C. § 112

Claim 1 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applications regard as the invention. Applicants respectfully traverse.

Specifically, the Examiner objects to Claim 1 for not specifying what constitutes an amount of leucine sufficient to enhance the learning ability of an animal (Action, page 3). While the Applicants do not necessarily agree, to progress prosecution, Claim 1 is herein amended to recite that the amount of leucine is from 2 to 4.5% on a wet weight basis.

Applicants kindly request withdrawal of the objection.

III. Claim rejection under 35 U.S.C. § 102(b)

Claims 1, 2, 4, and 5 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Ray *et al.* (U.S. Patent No. 5,283,077, "Ray"). Applicants respectfully traverse.

To anticipate a claim, the reference must teach every element of the claim (MPEP § 2131), and "anticipation under § 102 can be found only when the reference discloses exactly what is claimed" (MPEP § 2131.03 III citing *Titanium Metals Corp. v. Banner,* 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). The currently amended claims recite a composition that is adapted for a dog, cat or horse that contains 2.0 to 4.5% of leucine on a wet weight basis. First, Ray does not teach a composition adapted for the use of dog, cat, or horse but, rather, is concerned with human consumption (Ray, Table 1). Second, Paragraph **[0018]** of the specification further defines wet food as containing 70-90% moisture. Converting the percent wet food as given in the instant claims to dry percent as given by Burns can be done by taking the percent leucine (2-4.5%) and dividing that by the amount of dry matter (10-30%). This results in a range of leucine by dry matter between 6.6% (0.02/0.30) and 40% (0.045/0.1) for the claimed compositions. Thus, Ray discloses a composition neither adapted for a dog, cat or horse, nor having the percentage of leucine as recited in the currently amended claims.

Since not all of the claim limitations are disclosed in the cited reference, Applicants respectfully request withdrawal of the rejection.

IV. Claim rejection under 35 U.S.C. § 103(a)

Claims 1 and 3 are rejected under 5 U.S.C. § 103(a) as allegedly being obvious over Ray. Applicants respectfully traverse.

The Examiner alleges that "[t]he content of leucine, an essential amino acid, is a parameter whose benefits are known to those of ordinary skill in the art and thus the routine optimization of this parameter would have been well within the purview of one of ordinary skill in the art at the time of invention" (Action, page 4). First, Applicants disagree with the Examiner's common knowledge showing, and request the Examiner to detail the rational or provide evidence to support the statement (MPEP § 2144.03 C). Second, and most importantly, the Examiner has not addressed the result-effective variable that must be accounted for in a proper showing of obviousness of ranges (§ 2144.05 II B). It would ***not*** be routine to one of ordinary skill in the art to optimize a range for which the person does not recognize what the range is being optimized for (i.e. the use of leucine to enhance the learning ability of a dog, cat, or horse).

As an initial matter, the Applicants direct attention to MPEP § 2144.05 II B which states that only result-effective variables can be optimized:

> A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977) (The claimed wastewater treatment device had a tank volume to contractor area of 0.12 gal./sq. ft. The prior art did not recognize that treatment capacity is a function of the tank volume to contractor ratio, and therefore the parameter optimized was not recognized in the art to be a result- effective variable.). See also *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) (prior art suggested proportional balancing to achieve desired results in the formation of an alloy).

Ray does not recognize the result toward which the compositions of the instant claims are directed - the use of leucine to enhance the learning ability of a dog, cat or horse. Instead, Ray is only concerned with a snack food for human consumption, and leucine is included merely as one of many amino acids to meet human nutritional requirements (Col. 6, lines 51-54; Table I).

In addition, submitted herewith in an Information Disclosure Statement is an article that describes the leucine requirement for dogs (Burns et al., Leucine, Isoleucine, and Valine Requirements of Immature Beagle Dogs, Journal of Nutrition Vol. 114 No. 1 January 1984, pp. 204-209). Growing dogs were demonstrated to need 0.65 % leucine by dry weight to support optimal growth, feed efficiency and nitrogen retention (Burns, p. 207, col. 2). Additionally, Burns showed that increasing the amount of leucine demonstrated no additional benefit the dogs (Burns, p. 206, col. 1, ¶ 3). Further, the requirement of older dogs is less than that of growing dogs (Burns, p. 208, col. 1, ¶ 1). As described in section III of this paper, converting the percent wet food given by the claims to dry percent results in a range of leucine by dry matter of between 6.6% (0.02/0.30) and 40% (0.045/0.1). Given that one of skill in the art would know (1) the required percent of leucine by dry matter for dogs is 0.65% (Burns, p. 207, col. 2), and (2) that no additional benefit is seen by increasing the amount (Burns, p. 206, col. 1, ¶ 3), one of skill in the art would not have found it obvious to "optimize" the range of leucine to the high amount recited in the instant claims (6.6% to 40% by dry weight) in a composition adapted for a dog for the purpose of meeting the dog's nutritional need, as advanced by the Examiner.

Also submitted in the Information Disclosure Statement is an article on Food standards by AAFCO for the cat (http://www.peteducation.com/article.cfm?cls=1&cat=1399&articleid=657, "AAFCO"). The AAFCO requirements for leucine in cats is given as 1.25% by dry weight for both growing and adult maintenance. This is also well below the 6.6% of leucine by dry weight as required by the instant claims. Further, the amino acid requirements for horses is not known (http://www.umext.maine.edu/onlinepubs/htmpubs/1005.htm, submitted herewith in an IDS, section on proteins, page 2). Thus, one of skill in the art would not "optimize" the range of leucine to the amounts recited in the instant claims in a composition adapted for a cat or horse for the purpose of meeting a nutritional requirement for these animals.

In view of the above, Applicants respectfully request withdrawal of the rejection.

CONCLUSION

Applicants believe that no additional fee is needed. If additional fees are due, please charge our Deposit Account No. 06-2380, under Order No. HO-P03067US0 from which the undersigned is authorized to draw.

Dated: September 11, 2008

Respectfully submitted,

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